

Running head: EFFECTIVE PSYCHOLOGICAL EXAMS

Executive Development

Choosing an Effective Psychological Screening Program for the Ashtabula Division of Fire

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August 2007

CERTIFICATION STATEMENT

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotations marks so indicate and that appropriate credit is given where I have used the language, ideas, expressions, or writings of another.

Signed: \_\_\_\_\_

### Abstract

The Ashtabula Fire Department uses an independent psychological examination process that is expensive, potentially litigious and may eliminate qualified candidates. This evaluative research used a questionnaire and interviews answering research questions focused on what processes other fire departments use and explore ways to improve the screening process in Ashtabula. Extensive research has failed to identify a universal firefighter profile. Fire departments have their own expectations and personalities and are not a homogeneous group. The most successful approach appears to be reverse engineering; a process where the desired characteristics are identified first, candidates are then screened to identify the sought after traits. To maximize its return on investment, Ashtabula should revise its process to follow this model, or eliminate it.

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## Choosing an Effective Psychological Screening Program for the Ashtabula Division of Fire

### Introduction

As part of the firefighter hiring process, the Ashtabula Civil Service Commission (ACSC) mandates the use of a third party psychological examination. This examination is paid for by the fire department, costs \$550 and requires the candidate to travel to Columbus, Ohio (200 miles away) to complete the process (Ashtabula Civil, 2001).

The Ashtabula Division of Fire (ADF) hired three new department members in 2006. Two of these new members left the department within their first six months of employment for various reasons.

If the information generated by the existing psychological examination accurately predicts how firefighter candidates will perform when hired, or identifies undesirable traits, the current process is justified. However, the exam results of the two candidates who recently resigned did not predict or suggest their actions or behavior.

The problem is that neither the ADF, nor the ACSC have clearly defined the purpose of the existing pre-employment psychological screening process. The current pre-screening process is costly, time consuming and generates information without a frame of reference to use or a clear purpose.

The purpose of this evaluative research is to identify which psychological pre-screening instruments are being used by other fire departments and what information they are generating by implementing them.

*Research Questions*

- A. What personality/psychological measurements are currently being used by fire departments to screen candidate firefighters?
- B. What attributes are fire departments trying to measure with pre-employment psychological examinations?
- C. How do other fire departments use the information created by the pre-employment psychological examinations?

*Background and Significance*

Ashtabula is a small charter city located in Northeastern Ohio. Located in a rural agricultural/industrial area, the City of Ashtabula occupies 7.8 square miles and has 21,000 residents. The economic transition from an industrial based economy to a service based one has presented significant challenges for Ashtabula that are consistent with those experienced by other Northeastern United States cities.

The City Charter establishes a Civil Service Commission (ACSC) made up of three members, appointed by the legislative body and empowered with the authority to promulgate rules, which must then be endorsed by legislative body (Ashtabula Charter). Thus, the ACSC operates under three different sets of regulations: the Ohio Revised Code, Codified Ordinances and their own rules and procedures.

In 1996, the ACSC began requiring pre-employment psychological screening for both police and fire department entrance candidates. Initially, this screening was provided by a local psychologist and included intelligence tests, a personal interview and administration of the Minnesota Multiphasic Personality Index (MMPI®). The psychologist had the authority to

disqualify candidates based on his evaluation and approximately one-third of the fire department candidates were rejected (R. Balog, personal communication, March 5, 2007).

The candidates who passed were returned to the hiring authority for inclusion in the selection process; however, they were returned without competitive rank, or any rating. Previously, the Chief of the Fire Department (COD) simply interpreted the results in a pass or fail manner. In fact, the psychological results were frequently rejected in their entirety due to past experiences (R. Balog, personal communication, March 5, 2007). Of note historically, is a case where a member currently employed by the department had failed the psychological exam on a previous entrance list. This candidate scored first on the test, however, he was deemed unqualified by the examiner and eliminated from the process. The same candidate repeated the testing process in the next employment cycle, and once again scored at the top. This time the candidate passed the psychological exam administered by the same examiner and was hired (R. Balog, personal communication, March 5, 2007).

Following several legal actions involving police department entrance examinations ACSC decided to select another vendor to provide the pre-employment psychological screening process, electing to use a firm in Columbus Ohio. This group was chosen because of their experience in pre-employment testing of safety forces personnel. The existing screening process consists of the Hilson Safety and Security Risk Index (RSI), Hilson Personality Profile (HPP), the 16 Personality Factors (16PF) instruments and a personal interview. (C.Litterelle, personal communication, March 3, 2007). The current examiner does not use the MMPI® for firefighter candidates, only police department entrance candidates.

This new examiner screened a group of candidates vying for two open positions in 2006. All candidates who participated in the examination were deemed recommended again without

any competitive ranking. Two candidates were selected for employment and, were hired in February 2006. Shortly thereafter, one of the candidates resigned to accept a job offer from an out-of-state fire department. Another candidate was chosen from the same pool, offered employment and hired in June 2006. Almost immediately, the candidate began to demonstrate performance problems, which are not described here to protect the confidential nature of the issues, but the problems were not predicted in the written psychological evaluation report.

Fire departments have a significant interest in hiring qualified candidates who will perform their jobs effectively and serve as ambassadors of local government (Pappas, 2001). Since firefighters in Ashtabula are protected by both civil service laws and collective bargaining agreements, the department has a stake in identifying potential behavior and attitude problems as early as possible during the probationary period.

Secondarily, the hiring process is expensive (See Table 1) and funded from the fire department operating budget. During the budget planning process, allowances are made for the anticipated number of members who will be hired during the upcoming year. Unexpected, additional hiring expenses detract from the remaining operating funds and prevent other expenditures.

This research will explore the experience of other fire departments that are administering pre-employment psychological screening to identify how other departments are using this pre-employment tool in an attempt to offer alternatives to the ACSC.



Table 1

*The Cost of Hiring a Firefighter*

Description	Cost (in dollars)
Background check	200 <sup>a</sup>
Polygraph Examination	150
Psychological Examination	550
Physical Examination	1000
Initial Uniform Distribution	600
Initial Protective Equipment	1900
Total	4400

<sup>a</sup> Includes overtime expense for jobsite interviews.

The first program in the Executive Fire Officer Program (EFOP) addresses personal development and organizational leadership. One of the fundamental responsibilities of the Chief of the Department (COD) is to establish the culture of the fire department. This culture begins with the members. This research supports the fifth operational objective of the United States Fire Administration (USFA), which is responding appropriately and timely to emerging issues.

#### Literature Review

A review of the existing literature began at the Learning Resource Center (LRC) at the National Fire Academy (NFA) using the online card catalog. Searches of both the online catalog and the general internet were completed using the keywords “firefighter,” “pre-employment screening,” “psychological evaluation,” “MMPI®,” and “personality.” Results that were

consistent with the research questions were retrieved and reviewed. Additionally, EFOP applied research projects not directly on topic, but tangentially linked to the research, were reviewed, with particular attention focused on the reference section to locate additional literature sources.

There is a large number of postgraduate research available on this subject and most of the conclusions are contradictory. This literature review is focused less on the conclusions relating to firefighter personalities than the instruments used to measure them.

The Minnesota Multiphasic Personality Index (MMPI®) was created in the early 1940s at the mental hospital on the campus of the University of Minnesota (Paul, 2004). The instrument was created to help assess “abnormal personality tendencies and improve the diagnosis of individuals with mental disorder” (Santrock, 2000 p. 437-438). The instrument was created by offering a series of questions that are linked to ten separate clinical scales to mental patients. To create the normal or reference group, 724 people working on the campus were given the test and the responses between this control group and the mental patients were compared (Paul, 2004). In addition to being statistically small, only 0.000000577 of the 132,000,000 people in the United States at the time (U.S. Bureau, April 2000), the control group had many similarities. They were all white, mostly Protestant and married people between 16 and 55 who were educated to the eighth grade level (Paul, 2004). This control group remained the “Minnesota Normals” until the instrument was revised in the late 1980s. The new control group was expanded to 2600 members who were more representative of the demographic make-up of the United States (Paul, 2004). The revised MMPI® contains new items, bringing the total number of questions to 567 with the addition of several new scales, as well (Santrock, 2000).

The MMPI® has been the subject of controversy and legal attack. In response to perceived invasive nature of some of the questions, U.S. Senator Sam Ervin held hearings on the

MMPI® in 1965-66 (Paul, 2004). The defenders of the exam were able to obfuscate the issue by claiming the MMPI® detractors were “prudish or irrational” (Paul, 2004, p. 60). The legal challenges to the MMPI® have continued through the recent, significant, court decision *Karraker v. Rent A Center et al*, discussed later in this document.

The Meyers Briggs Type Indicator (MBTI) is another instrument available to fire departments. Developed by a housewife and later her daughter (neither of whom were trained psychologists/psychiatrists), the MBTI is based on the theories of Carl Jung (Paul, 2004). The indicator uses 93 forced choice questions to identify four dichotomies, which are combined to form sixteen personality types (Meyers Briggs Type, n. d.).

The MBTI differs from the MMPI® and other instruments in that it does not attempt to diagnose psychopathology, but to describe existing personalities (Bennet, 2004). The publisher touts the instruments validity after first acknowledging the difficulty of measuring personality by claiming “The MBTI® instrument meets and exceeds the standards for psychological instruments in terms of its reliability” (“Reliability,” n. d.). Those who support the exam do not seem to be concerned with the fact that the test is based on the now-rejected theories of Jung. Steven Reiss of The Ohio State University acknowledges some of the tests faults but states “academic people have not looked at it because it’s based on Jung...so it’s based on bad science but it actually works” (Bennet, D. 2004, p. 3).

Critics of the MBTI cite issues with the scoring, the validity of retesting and its reliance on Jung’s flawed theory (Meyers Briggs Type, n. d.). Despite the limitations and debate, the MBTI is very commonly used personality assessment tool, administered to three million people in 1993 and used by eighty-nine of the Fortune 100 (Paul, 2004, p. 125).

Another instrument available is the Sixteen Personality Factor Exam (16PF) and its successor, the NEO PI-R (Neuroticism, Extroversion, Openness to experience and Personality Index Revised). These exams are based on the theory of lexical hypothesis, or to put it another way, if something is important a word has been invented for it (Paul, 2004). The original 16PF was a 187-question instrument that distilled the responses down to one of sixteen personality factors. Later, psychologists began to theorize that the sixteen personality factors could be whittled down to three, which were later increased to five, yielding the NEO PI-R. Like the MBTI, the 16PF is considered useful for evaluating personalities in the “normal” range (“Objective,” n. d.).

The California Psychiatric Index (CPI) is a 480 question self-reporting exam that is similar to the MMPI®; however, unlike the MMPI® it is based on “normal” personality. Approximately half of the questions on the CPI were taken from the original MMPI®. Normal profiles are available for males, females or both. This instrument is well regarded by psychological professionals since it is based on “normal” people, not psychiatric patients (California, n. d.).

According to the website of a company that supplies the Adult Personality Index (API), it is a computer scored exam that yields a six-page report detailing the personality traits, interpersonal style and career facts about the test taker. (The Adult, n. d.). The company goes on to state that the exam is particularly effective for jobs that require interpersonal skills.

One of the specific exams used by ADF is the Hilson Personnel Profile/Success Quotient (HPP/SQ®). Hilson Research has been creating personality tests since 1988. According to their website

The HPP/SQ is a very promising instrument for employee selection and should prove useful to industrial/organizational psychologists, personnel administrators, and researchers....The short examination time required, sixth grade reading level, non-threatening nature of item content, and flexibility of administration (individual and group) contribute to the utility of the HPP/SQ (Hilson Personnel, n.d.).

There are other instruments available to fire departments that are administered locally then graded by a vendor, or purchased directly and administered and graded locally. These include the Hogan Personality Index, Pradco Firefighter Index, Wonderlic among others. Classifying these instruments is problematic. Some are considered personality predictors, some are measures of intelligence and problem solving ability and others are considered integrity indicators. Fire departments must select an instrument that measures the indicators that they select. Occasionally, distinguishing what the instruments are trying to measure is complicated by the built in accuracy scales. Distinguishing the built-in reliability score from an integrity test can be difficult. According to the Office of Technology Assessment,

This issue of deciding which tests is integrity tests and which are not seems to ignite considerable debate and acrimony. Some tests include items or scales seemingly related to honesty generally (if not in the workplace); but the publishers of these tests assert -- often quite vehemently --that they are not integrity tests. (Office of Technology, 1990)

How accurate are these exams in predicting firefighter behavior? There are 3551 references to psychological screening or testing in the LRC online catalog. Much research has been conducted on establishing a profile that can be used to predict either firefighter behavior or job performance. The results of the research are contradictory and do not establish a universal profile of the ideal firefighter.

Arvey and Mussio attempted to correlate the results of the MMPI® with existing firefighters in the Midwest. Seventy-three firefighters had taken the MMPI® as a pre-employment screen and were carefully evaluated by their supervisors on eleven job performance indicators. When the results were compared, “the low number of statically significant correlations and the low values obtained indicate that the MMPI® may not be particularly useful in predicting job performance of fireman” (Arvey & Mussio, 1972, p. 200).

In his doctoral dissertation, Pappas attempted to predict the ideal personality of firefighters in Chicago by comparing the MBTI scores of working firefighters to develop a profile that could be applied to a cadet program in the local schools to predict which cadets would actually make good firefighters. Pappas was able to define a predictable profile in firefighters that was significantly different from the general population (2001).

Also, by using the MBTI, Cassel was able to identify a unique personality in firefighters, and perhaps more significantly the firefighters had unique MBTI “personalities” depending on rank. Chief Officers had different scores than firefighters and both groups were different from the general population (Cassel, 1997).

Compelling reasons exist for fire departments to want to predict behavior and performance. Firefighters work in close quarters with others in an environment that is part work and part family (Niles, 1995). Hiring the right candidate initially eliminates the cost of turnover, retesting and the human factors associated with poor employee performance. If a valid profile of the individual fire department was used as the measuring instrument, the hiring authority could identify the candidates most likely to fit in.

Can the commonly used exams accurately predict job performance, or identify undesirable conduct? A retrospective study conducted to review the medical appeals of rejected

police and firefighter candidates in New Jersey revealed that projective tests were given to large percentages of the rejected candidates (41% of police and 86% of firefighters).

Self-reporting examinations were used frequently as well. Popular among the self-reporting exams, interestingly the MMPI® was given to 89 of the 175 police candidates, but only 9 of the 35 fire candidates (Johnson, 1983). Johnson concludes that situational testing (rarely used on the rejected candidates evaluated in the article) will become “the means of predicting behavior and effectiveness in a variety of vocations including police work and, by implication, fire fighting” (Johnson, 1983, p 433).

One California psychologist who evaluates rejected police and firefighter candidates has found 30%-50% of the rejected candidates “could handle the job” (Captain. B, 1998, p. 136).

This is no small issue for the fire service. The current workforce is only expected to grow by 10 percent over the next decade, less than the 12.5 percent over the previous decade. The number of jobs is projected to grow by 13 percent (Bureau of Labor, 2005). Fire departments may be discarding valuable candidates without sufficient cause.

Local attempts have been made to validate the process, as well. By using a series of nine profiles and two groups of firefighters, one identified by their department as high performers, the second group was considered low performers, consultants attempted to establish normals for a Southeastern metro fire department (Baute, n.d.). Among the profiles used were the MMPI®, 16PF and Wonderlic basic skills test. The study was able to establish clear distinctions in the profile results but the candidate test results were compared to known high performers within the testing agency.

In summary, numerous tools exist to screen firefighter candidates for a variety of metrics, including personality, behavior and other key characteristics. Some researchers have identified

specific profiles that can be isolated in groups of firefighters within individual fire departments; however, no universal, objectively normalized profile currently exists.

### Procedures

A questionnaire was developed to solicit input from other fire departments. This instrument (Appendix A) was formatted for Internet-based administration by the computer programming class at the local vocational school (Appendix A) with additional technical assistance provided by a member of the author's fire department. The completed questionnaire was posted at an Internet site for ease of administration and the website was configured to email an electronic copy of the completed questionnaire to the author.

Feedback was solicited via several methods. A cover message and electronic link to the questionnaire was created (Appendix B) and distributed electronically to all potential questionnaire participants through several methods. The cover letter request was distributed via *TRADENET* the USFA electronic bulletin board- that is sent weekly to 6100 subscribers on March 9, March 16 and March 23, 2007. The same cover letter was distributed to members of the Ohio Fire Chiefs Association Executive Fire Officer email distribution list (approximately 150 members). Finally, members of the author's Executive Development Class received the cover letter and were asked to route the document to the appropriate person within their fire department and forward the request to associates in other fire departments.

The returned data was entered into a Microsoft® Excel spreadsheet formulated with column headers that mimicked the questions. The auto complete function of Excel was used to prevent duplication of results. The following steps were used to analyze the data.

1. The total number of questionnaires was counted.
2. Returned questionnaires that did not have fire department names were deleted.



3. Multiple questionnaires from the same department were compared, merged into one document and the duplicates deleted.
4. Returned questionnaires that had more than one invalid answer were deleted.
5. The number of remaining questionnaires was counted.
6. The data sort function of Excel was used to separate the questionnaires into two categories (using psychological tests and not using psychological tests).
7. Tables were created to summarize the results.

In addition to the questionnaire, interviews with several individuals having specific information or knowledge were conducted. The first of these interviews was with former Fire Chief Richard Balog. This interview focused on the history of psychological testing in the fire department, his perception of the success of the testing, and how he felt the process could be improved.

The second interview was a perfunctory telephone conversation with the office manager of the current psychological testing company, Ms. Cheryl Litterelle to confirm which exams the ADF currently uses.

Finally, an interview was held with Margaret Lahner, Psy.D., a clinical psychologist who is interested in this subject. Dr. Lahner currently performs pre-employment psychological screening for multiple public safety agencies in Northeast Ohio. One of the fire departments responding to the questionnaire suggested and coordinated a meeting between the author and Dr. Lahner. In addition to an historical perspective, Dr. Lahner described in detail the procedure that she uses for pre-employment screening, and her thoughts on how to sort and use the information collected during the screening process.

*Definition of Terms*

Unless otherwise noted, all definitions are from *Psychology* by Santrock.

Personality The enduring, distinctive thoughts, emotions and behaviors that characterize the way an individual adapts to the world.

Projective Test A test that presents individuals with ambiguous stimulus and then asks them to describe or tell a story about it. These tests are based on the ambiguity of the stimulus allowing the individual to project their feelings, needs, and attitudes into the response.

Self-Reporting Exam Tests that involve directly asking people whether items (usually true-false or agree-disagree) describe their personality traits or not. These are also called objective tests.

Norming an exam (Norms) Established standards of performance for a test. Norms are established by giving the test to a large group of individuals who are representative of the population for whom the test is intended. Norms allow the test constructor to determine the distribution of test scores, informing us which scores are considered high, low or average.

*Limitations of this research*

The primary limitation of this research is that is based on the opinions submitted by fire departments; no objective measures are employed. Additionally, several assumptions were made when processing the data obtained from the questionnaire. They include, the fact that whoever completed the survey was truthful and had sufficient knowledge to answer the questions appropriately. It was also assumed that the questionnaire was completed by a member of the department listed in the questionnaire.

When reviewing the questionnaire, several additional questions would have been helpful. These would have included the state the department was located in (to help eliminate duplicates).

In retrospect, more analysis could be done if the size of the fire department had been collected. The inclusion of free text comment fields collected some useful information, but complicated the numerical analysis of the data collected.

The original hope was to collect four hundred completed questionnaires. Data collection was cut off on April 1, 2007 when the number of duplicate responses began to increase dramatically. Interestingly, responses peaked in the two days following publication in *TRADENET* and dwindled to zero at the end of the time between publications.

### Results

A total of 219 questionnaires were returned. Of these, 76 (36%) had no fire department named, were duplicates, or contained more than the arbitrarily determined allowable number of errors. After all screening was completed, 143 valid instruments were included. Because of the multiple free field responses, the totals of responses vary.

The general demographic information of the respondents is summarized in Table Two.

Table 2

*General Information*

Dept Type	Size			Civil	Using
	<25	26-75	76+	Service	Exam
Volunteer	1	6	1	1	1
Combination	10	34	14	14	13
Career	0	20	12	20	32

Only 32% of the responding departments are using some form of pre-employment psychological screening. The vast majority (69%) of the departments using this testing are career departments, followed by 28% combination departments and 2% were volunteer departments.

Most departments (73%) are using an independent third party to administer the exam, while 24% are using a healthcare provider and one department (2%) administers its own examination.

The answer to the first research question, “What personality/psychological measurements are currently being used by fire departments to screen candidate firefighters,” is shown in Table Three.

Table 3

*What Exam(s) Do You Use*

Exam	Number
MMPI®	24
MBTI	15
Other (not defined)	13
API	6
Other IQ	6
Invalid Response	6
Unknown/Not Sure	4
Pradco Firefighter Index	3
Ca. Psych.	3
HLAP (not defined)	1
Ergometrics (not defined)	1
Hogan PI	1
Wonderlic	1
LPI	1

The answer to the research question, “How do other fire departments use the information created by the pre-employment psychological examinations,” is shown in Table Four.

Table 4

*How Do You Use the Exam Results?*

Response	Number
Pass or Fail	33
Final Decision	14
One part of the process	4
Rank Candidates	2
Unknown	2
Advisory Information	1
Best Practice	1
Degree of Fit to Department	1
Evaluation Tool	1
Help Decide	1

The final research question, “What attributes are fire departments trying to predict with their pre-employment screening exam,” is answered in Table Five.

Table 5

*What Traits are You Looking For?*

Trait	Number	Trait	Number
Teamwork	7	Emotional Adjustment	1
Interpersonal Habits	5	Judgment	1
Work Habits	4	Mechanical Ability	1
Intelligence	2	Problems with Public	1
Attitude	2	Anti Social	1
Motivation	2	Decision Making	1
Problem Behavior	2	Logic	1
Stress Levels	2	Reasoning	1
Successful Traits	2	Math	1
Unknown/Not Sure	2	Psychopath	1
Anger Management	1	Loyal	1
Compassion	1	Leadership	1
Fit to Department	1	Impulsivity	1
Honesty	1	Ethical	1
Independence	1	Initiative	1
Malleable	1	Mood Disorders	1
Aggressive Behavior	1		

Only sixteen (34%) of the responding departments stated they use a profile specific to firefighters when “scoring” their exams. Twelve (26%) departments stated that they do not have

a specific profile that they use to score the exam. The remaining departments either did not know the answer (n=9 or 19%) or left the question blank (n=9 or 19%).

Finally, the fire departments assessment of the accuracy of their exam(s) is detailed in Table Six.

Table 6

*How Accurate Do You Feel Your Exam Is?*

Description	Responses	% <sup>1</sup>
Very Accurate	13	28
Somewhat Accurate	21	45
Somewhat Inaccurate	5	11
Very Inaccurate	2	4
Unknown/Unsure	4	8
Invalid Response	1	2

<sup>1</sup> Percentages do not equal 100 due to rounding.

The general information from the fire departments that are not using any psychological screening during their pre-employment process is detailed in Table Seven.



Table 7

*Departments Not Using Psychological Screening.*

Dept Type	Size			Civil	Not Using
	<25	26-75	76+	Service	Exam
Volunteer	1	4	1	0	6
Combination	4	23	8	9	35
Career	2	15	17	14	34

### Discussion

The discussion of psychological testing in the fire service is not new. A *Fire Engineering* editorial from 1969 states in part that:

In recent years, some fire service authorities have expressed the opinion that a psychiatric examination be given to all prospective firefighters. The purpose would be to weed out Those who may have unstable tendencies and are seeking an outlet for their inner feelings under the mask of respectability... psychiatrists have studied firefighter behavior patterns and have come to some interesting conclusions... believes arsonists and firemen have the same personality conflicts and impulses at an early age. However the fireman finds a healthy social outlet for this conflict... (O'Brien, 1969, p 119).

In response to civil unrest, Jersey City, New Jersey began psychological screening of its police and fire candidates in 1966. Their hope was to identify “persons who would not overreact” (Schmidt, 1978).

Firefighters are public employees and custodians of public trust who are vested with extraordinary powers, including the right to enter people's homes and when necessary perhaps destroy their personal property (Pappas, 2001). The government has a fiduciary responsibility to empower qualified candidates with this ability (Graham & Hays, 1986).

In addition, many firefighters are protected by either Civil Service Regulation, Collective Bargaining Agreements, or both. Once firefighters complete their probationary period, they can only be disciplined or dismissed for serious behavioral infractions. Personality friction, poor work habits or lackadaisical behavior become career-long issues.

Firefighters, especially career firefighters live in close quarters for extended periods. This is a very challenging issue for the hiring authority. The successful firefighter must be as technically competent as any other worker must. Even so, they must also possess the interpersonal skills needed to live with other firefighters (Niles, 1995).

Finally, firefighting is generally accepted as a noble profession that is held in very high regard by the public (Niles, 1995 & "America's Most"). To maintain this mutually beneficial relationship, fire departments must hire members who have both the technical and people skills required.

Central to this research is the question, "does a universal psychological profile of a firefighter exist". The simple answer is no. Some authors have isolated specific profiles, character traits or other metrics via various psychological evaluations. However, the profiles differ greatly. One universal profile for firefighters could not be identified in the literature review.

A firefighter profile is available to score the MMPI®. When reviewed, this profile is virtually identical to the general profile, differing only in four areas. The other concern with the

MMPI® profile is that it is based on a compilation of 611 firefighters and paramedics. The general worker profile is compiled from 18,365 applicants (Butcher, n.d.). Are these sufficiently large enough samples to “norm” the exam, and more importantly, do the 611 firefighters and paramedics used to create the profile have a personality that will fit into the prospective fire department?

Psychological screening has been proven to predict certain job performance. Successful screening is generally “reverse engineered.” High-performing individuals in a given field or location are identified and the characteristics that make them high performers are described. The high performers are then “tested” to create the psychological profile desired.

This process has been successfully used by the military to identify snipers and special forces operators (Girard & Scholtz, n.d.). The Forest Park, Ohio Fire Department has recently conducted research on identifying their department’s personality and creating a benchmark to measure new employees against (Bryan, 2006). This assessment of the culture to create a “ruler” method is also being used successfully by a clinical psychologist in Northeastern Ohio who performs pre-employment psychological screening for both police and fire departments. This clinician interviews the members of the testing agency to identify the culture of the organization, then measures the candidates against it (Interview with M. Lahner, April 3, 2007).

Since only 34% of the respondents to the questionnaire stated that they were using a specific profile to score their screening, it appears that most of the departments included in this research (including the author’s) do not use this approach. In fact, this research does not even support a consensus of desirable fire department behaviors. Table 5 lists 32 different specific traits identified in the questionnaire. The modal response was teamwork (n=7), followed by

interpersonal habits (n=5) and work habits (n=4). The 32 listed traits can be generally divided into several general categories: relationship skills, intelligence/aptitude and abnormal behaviors.

The general specificity in desirable traits is troublesome in light of the rather high number of departments who use psychological screening as the final decision tool, or to eliminate candidates from the employment process (47 of 60 respondents). Are fire departments eliminating candidates without sufficient cause? Candidates who are eliminated without sufficient cause, for inappropriate reasons, or because of unfair bias in the testing process may have legal recourse under the Civil Rights Act or the Americans with Disabilities Act (ADA), as seen in *Griggs et al v. Duke Power* (1971), *EEOC v. Atlas Paper Box Company* (1989), *Karraker v. Rent-A-Center et al* (2005).

*Karraker v. Rent-A-Center et al* establishes the MMPI® as a medical exam whose use violates the ADA. The court held that “...because it is designed at least in part, to reveal mental illness and has the effect of hurting the employment prospect of one with mental disability, we think the MMPI® is best categorized as a medical examination...”(2005).

This finding is consistent with the Ohio Civil Service Rules that state candidates may only be given a psychological exam after a conditional offer of employment has been offered (Ohio Admin. Code, 2000). Trepidation regarding potential legal complications may be a motivating factor for the 68% of fire departments that responded to the questionnaire and do not use pre-employment psychological screening.

As previously discussed, all employers are likely to face a shortage of workers over the next generation. The workforce is shrinking while the number of jobs is projected to increase (Bureau of Labor, 2005). The Federation of Public Employees (FPE) is a collaboration between several unions that represent government employees. The FPE commissioned a study to identify

ways to recruit and retain government employees. In it, they conclude that; "Over the next 15 years government employees face a crisis in recruiting and retaining quality employees. Two-fifths of state and local government employees will be eligible to retire...." (Federation of Public Employees, n.d., p. 3). In the appendix to the FPE report, the additional challenges of a shrinking workforce are addressed. It reads, "The WWII generation and the baby boomers combine to make 60% of Iowa's state workforce more than 40 years old." The same appendix continues to state that one-third of the City of Minneapolis's workforce will be eligible to retire within five years. (Federation of Public Employees, p. 18). Fire departments may not be able to fill openings if qualified candidates are unnecessarily rejected because of general, unspecific psychological screening.

Convincing fire departments to change their pre-employment screening procedures may be a difficult task. The vast majority (34 of 46) of fire departments who responded to the questionnaire feel that their testing is accurate. In light of the lack of specific standards and vast array of available exams, what metric is being used to evaluate the screening performance? Can departments who are making life-affecting decisions for entry candidates validate their process objectively, or are they suffering from the Forer Effect?

In 1948, psychologist Bertram Forer gave a personality test to his students and asked them to rate the test's analysis of their personality on a 5-point likert scale (See Appendix C for the test). Unbeknownst to them, he had fabricated the test from horoscopes. The average response in Forer's class exceeded four on the likert scale, a phenomenon repeated routinely since. (Forer Effect, n.d.). Also known as the Barnum effect, it is based on the theory that individuals will give high accuracy ratings to something supposed created for them, but is sufficiently vague to apply to a wide range of people.

Are fire departments falling prey to this phenomenon when evaluating their psychological testing, or can they support their process with measurable, key indicators? Given the cost, administrative time and potential legal repercussions, fire departments may be better off abandoning their testing if it cannot be objectively validated. For the ADF, this means either convincing the Civil Service Commission to discontinue the testing process, or completely revising it by “reverse” engineering.

### Recommendations

The following recommendations result from this research.

1. Any pre-employment psychological testing should be carefully evaluated by legal counsel familiar with the federal and state laws governing hiring practices.
2. The test administrator should not have carte blanche to disqualify candidates without sufficient cause as defined by the fire department.
3. Fire departments using psychological screening should seriously consider the traits, qualities and behavior that fit their culture and test for them.
4. The best practice in pre-employment screening is to “reverse” engineer the test using top performers in the organization to identify the profile of the ideal candidate.

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Appendix A  
Questionnaire Pre-Employment Psychiatric Screening Questionnaire

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**Department Name:**

**Department Size:**

Choose Size ▾

**Department Type:**

Choose Type ▾

**Does Your Department Operate  
Under a Civil Service Commission?**

Choose One ▾

**Does Your Department Use Pre-  
Employment Psychiatric Exam?**

Choose One ▾

(If No)Thank you Click here

**Who Administers Your Exam?**

Choose One ▾

**Which Exam(s) Do You Use?**

☐ MMPI® 2 ☐ API ☐ 16 P or Variant

☐ Meyers Briggs ☐ Hogan PI

☐ Wonderlic ☐ Other IQ Test

Commercial Self Exam(please type the exam  
name)

**Is Your Commercial Self Exam  
Based On or Graded On An Existing**

Choose One ▾

**firefighter Specific Profile?**

**How Do You Use The Exam Results?**

☐ Final Decision On Candidate ☐ Pass/ Fail Only

☐ Not Sure

Other(please explain)

**Why Do You Use The Exam?**

☐ Mandated For Use ☐ Not Sure

Other(please explain)

**Are You Trying To Predict Specific Behavior Traits With Your Exam?**

Choose One ▼

**If Yes - List Them**


**How Accurate Do You Think Your Psychiatric Exam Is?**

Choose One ▼

**Comments:**

## Appendix B

## Sample Returned Questionnaire

Friday, March 23, 2007, 7:45 am [EST]

Department: Brooklyn Park Fire Department

Department Size: More Than 75

Department Type: Combination

Does Your Department Operate Under a Civil Service Commission?  
No

Does Your Department Use Pre-Employment Psychiatric Exam? Yes

Who Administers Your Exam? Independent Party

Which Exam(s) Do You Use? - - - Meyers Brigs - - - -

Is Your Commercial Self Exam Based On or Graded On An Existing  
firefighter Specific Profile? No

How Do You Use The Exam Results? - Pass/ Fail Only - -

Why Do You Use The Exam? - - Screening Process

Are You Trying To Predict Specific Behavior Traits With Your  
Exam? Yes

If Yes, List Them Problem behaviors - Leadership traits - - -  
-

How Accurate Do You Think Your Psychiatric Exam Is? Somewhat  
Accurate

Comments: We have had good success with our process.

## Appendix C

## Forer Effect Personality Statement

You have a need for other people to like and admire you, and yet you tend to be critical of yourself. While you have some personality weaknesses, you are generally able to compensate for them. You have considerable unused capacity that you have not turned to your advantage. Disciplined and self-controlled on the outside, you tend to be worrisome and insecure on the inside. At times, you have serious doubts as to whether you have made the right decision or done the right thing. You prefer a certain amount of change and variety and become dissatisfied when hemmed in by restrictions and limitations. You also pride yourself as an independent thinker; and do not accept others' statements without satisfactory proof. But you have found it unwise to be too frank in revealing yourself to others. At times, you are extroverted, affable, and sociable, while at other times you are introverted, wary, and reserved. Some of your aspirations tend to be rather unrealistic.